

IN THE CLAIMS:

Claims 1 through 24, 27, and 28 were previously cancelled. None of the claims have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as previously amended.

Listing of Claims:

1.-24. (Cancelled)

25. (Previously presented) A method of generating delay locked clocks, comprising:
determining a first phase difference between a clock signal and a first delayed clock signal to ascertain a first delay magnitude;
delaying the clock signal by the first delay magnitude to generate the first delayed clock signal substantially synchronized to the clock signal;
determining a second phase difference between an inverse clock signal and an inverted delayed clock signal to establish a second delay magnitude; and
inverting and delaying the first delayed clock signal by the second delay magnitude to generate the inverted delayed clock signal substantially synchronized to the inverse clock signal.

26. (Previously presented) The method of claim 25, further comprising generating a timing signal by generating a rising edge of the timing signal in response to the first delayed clock signal and generating a falling edge of the timing signal in response to the inverted delayed clock signal.

27. (Cancelled)

28. (Cancelled)

29. (Previously presented) The method of claim 26, wherein determining the first phase difference comprises comparing a rising edge of the clock signal with a rising edge of the timing signal generated in response to the first delayed clock signal.

30. (Previously presented) The method of claim 29, further comprising asserting a phase-lock signal when the first phase difference is substantially near zero.

31. (Previously presented) The method of claim 30, wherein determining the second phase difference is initiated in response to the assertion of the phase-lock signal.

32. (Previously presented) The method of claim 26, wherein determining the second phase difference comprises comparing a rising edge of the inverse clock signal with a falling edge of the timing signal generated in response to the inverted delayed clock signal.

33. (Previously presented) A method, comprising:
generating a first delayed clock signal by delaying a clock signal in response to at least one first control signal;
generating an inverted delayed clock signal by inverting and delaying the first delayed clock signal in response to at least one second control signal;
generating a timing signal in response to the first delayed clock signal and the inverted delayed clock signal;
generating the at least one first control signal by phase comparing the clock signal and the timing signal; and
generating the at least one second control signal by phase comparing an inverse clock signal and an inverted version of the timing signal.

34. (Previously presented) The method of claim 33, further comprising generating an additional delay, of a predetermined amount, on the first delayed clock signal.

35. (Previously presented) The method of claim 34, wherein generating the timing signal comprises:

generating a rising edge of the timing signal in response to the first delayed clock signal; and
generating a falling edge of the timing signal in response to the inverted delayed clock signal.

36. (Previously presented) A synchronizing circuit, comprising:
a first phase detector configured to generate at least one first control signal related to a first phase comparison of a clock signal and a first delayed clock signal;
a first delay line configured to generate the first delayed clock signal as a delayed version of the clock signal by a first delay magnitude related to the at least one first control signal;
a second phase detector configured to generate at least one second control signal related to a second phase comparison of an inverse clock signal and an inverted delayed clock signal;
and
a second delay line configured to generate the inverted delayed clock signal, as an inverted and delayed version of the first delayed clock signal, by a second delay magnitude related to the at least one second control signal.

37. (Previously presented) The synchronizing circuit of claim 36, further comprising circuitry coupled to the first delay line and the second delay line, the circuitry configured to create a first edge of a timing signal in response to the first delayed clock signal and a second edge of the timing signal in response to the inverted delayed clock signal.

38. (Previously presented) The synchronizing circuit of claim 37, wherein the circuitry coupled to the first delay line is coupled through a third delay line.

39. (Previously presented) The synchronizing circuit of claim 38, wherein the third delay line is configured to add a third delay magnitude of a predetermined amount to the first delay magnitude of the first delayed clock signal.

40. (Previously presented) An electronic system comprising:
a processor;
a memory device associated with the processor; and
at least one of an input device, an output device and a data storage device associated with the processor;
wherein at least one component of the electronic system comprises a synchronizing circuit comprising:
a first phase detector configured to generate at least one first control signal related to a first phase comparison of a clock signal and a first delayed clock signal;
a first delay line configured to generate the first delayed clock signal as a delayed version of the clock signal by a first delay magnitude related to the at least one first control signal;
a second phase detector configured to generate at least one second control signal related to a second phase comparison of an inverse clock signal and an inverted delayed clock signal; and
a second delay line configured to generate the second inverted clock signal, as an inverted and delayed version of the first delayed clock signal, by a second delay magnitude related to the at least one second control signal.

41. (Previously presented) A semiconductor substrate comprising structures configured to synchronize data to a system clock signal, the structures comprising:
a first phase detector configured to generate at least one first control signal related to a first phase comparison of a clock signal and a first delayed clock signal;
a first delay line configured to generate the first delayed clock signal as a delayed version of the clock signal by a first delay magnitude related to the at least one first control signal;
a second phase detector configured to generate at least one second control signal related to a second phase comparison of an inverse clock signal and an inverted delayed clock signal;
and
a second delay line configured to generate the inverted delayed clock signal, as an inverted and delayed version of the first delayed clock signal, by a second delay magnitude related to the at least one second control signal.